UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte NIRANJAN TRIPATHY, GILBERT LEVESQUE, and
SALIM GALOU

Appeal 2007-1126
Application 09/580,516
Technology Center 2100

Decided: July 16, 2007

Before JAMES D. THOMAS, KENNETH W. HAIRSTON, and
ST. JOHN COURTENAY, III, *Administrative Patent Judges*.

COURTENAY, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 1-21. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

THE INVENTION

The disclosed invention relates generally to telecommunication systems and, more particularly, to element management systems which remotely manage telecommunications network elements (Specification 1).

Independent claims 1, 4, 12, and 21 are illustrative:

1. A computer/software system for managing telecommunication network elements, comprising:

one or more operator-driven processes which monitor and manage network elements of a voice and data network, in real time, using at least one telecommunications network control channel; and

automatically initiated background processes which remotely backup information which has been locally stored in ones of said network elements.

4. A method for managing a plurality of network elements of a telecommunications network, comprising:

coupling a telecommunications network element manager with a plurality of network elements that provide voice network connectivity, using at least one telecommunications network control channel;

each network element being operable to store respective local data regarding the configuration or operation of the network element;

receiving, from each of the plurality of network elements, the respective local data; and

storing the respective local data at a database of the network element manager.

12. A network element manager, comprising:

an interface being operable to communicate with a plurality of network elements of a voice and data network, using at least one telecommunications network control channel, and receive respective local configuration data regarding the plurality of network elements; and

a memory operable to store the respective local configuration data regarding the plurality of network elements.

21. A method for managing a plurality of network elements of a telecommunications network, comprising:

coupling a telephony network element manager with a plurality of network elements of a voice and data network, using at least one telephony network control channel;

each telephony network element being operable to store respective local data regarding the configuration or operation of the telephony network element;

receiving, from each of the plurality of telephony network elements, the respective local data;

storing the respective local data at a database of the telephony network element manager;

wherein at least one of the plurality of telephony network elements comprises an IP gateway network element having an active memory and a random access memory that is coupled for communication with the active memory;

copying configuration files to the random access memory, from the active memory; and

copying contents of the random access memory to the telephony network element manager using FTP protocol.

THE REFERENCES

Browne	US 5,768,353	Jun. 16, 1998
Reed	US 5,862,325	Jan. 19, 1999
Low	US 5,910,984	Jun. 8, 1999

THE REJECTIONS

Claims 1-4, 8, 12, 16, and 20 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Low.

Claims 5, 9, 13, and 17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the teachings of Low in view of Browne.

Claims 6, 10, 14, 18, and 21 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the teachings of Low in view of Reed.

Claims 7, 11, 15, and 19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the teachings of Low in view of Browne, and further in view of Reed.

Rather than repeat the arguments of Appellants or the Examiner, we make reference to the Briefs and the Answer for the respective details thereof.

Claims 1-3

We consider first the Examiner's rejection of claims 1-3 as being anticipated by Low. Since Appellants' arguments with respect to this rejection have treated these claims as a single group which stand or fall

together, we will select independent claim 1 as the representative claim for this rejection. *See* 37 C.F.R. § 41.37(c)(1)(vii)(2004).

Appellants argue that Low does not disclose, teach, or suggest remotely backing up information which has been locally stored in ones of said network elements (Br. 11). Appellants further argue that Low does not disclose the information stored in "reliable store 55" is also stored or backed up at a remote network element (Br. 13).

The Examiner disagrees. The Examiner notes that the application does not define "remote." Thus, the Examiner concludes the language of the claim broadly but reasonably reads on a backup of data to a logically separated component, i.e. a primary/secondary separation within a network element [as disclosed by Low in Fig. 10] (Answer 6).

In rejecting claims under 35 U.S.C. § 102, a single prior art reference that discloses, either expressly or inherently, each limitation of a claim invalidates that claim by anticipation. *Perricone v. Medicis Pharm.*, 432 F.3d 1368, 1375-76, 77 USPQ2d 1321, 1325-26 (Fed. Cir. 2005) (citing *Minn. Mining & Mfg. Co. v. Johnson & Johnson Orthopaedics, Inc.*, 976 F.2d 1559, 1565, 24 USPQ2d 1321, 1326 (Fed. Cir. 1992)). Anticipation of a patent claim requires a finding that the claim at issue "reads on" a prior art reference. *Atlas Powder Co. v. IRECO, Inc.*, 190 F.3d 1342, 1346, 51 USPQ2d 1943, 1945 (Fed Cir. 1999) ("In other words, if granting patent protection on the disputed claim would allow the patentee to exclude the public from practicing the prior art, then that claim is anticipated, regardless of whether it also covers subject matter not in the prior art.") (internal citations omitted).

We begin our analysis by noting that an object (e.g., data storage) may be considered "remote" only with respect some "local" point of reference. After carefully considering the evidence before us, we find a broad but reasonable interpretation of claim 1 does not preclude the Examiner's interpretation that the fault-tolerant database or disc drive of "reliable store 55" is "remote" with respect to the local memory of "normal service logic 50," as shown in Fig. 10 of the Low reference (*see* Low, col. 10, ll. 41-43, i.e., the "local memory" of "first service logic 50"; *see also* col. 11, ll. 30-31, i.e., "The reliable store 55 is, for example, a fault-tolerant database or a disc drive").

In particular, we find the claimed "network element" broadly but reasonably reads on each of the elements shown in Fig. 10, in addition to the Service Providing Apparatus (SPA) considered as a whole. We note that Appellants have not argued a particular definition for the claimed "network elements" (claim 1). Therefore, we broadly but reasonably construe the recited "network elements" as *any elements or components within a network.* Indeed, even if we were to construe the term "network elements" in accordance with Appellants' definition as set forth in the Specification, we find this term has sweeping breadth:

> NE [Network Element] —The term refers to hardware only or a combination of hardware and software system that is primarily designed to directly perform a telecommunications service function.
> (Specification 121, ll. 8-10)

Therefore, we find that "reliable store 55" (a network element) may be reasonably considered "remote" from the local memory (col. 10, l. 43) of

"service logic 50" (also a network element). Thus, we find the language of the claim broadly but reasonably reads on the Low reference, as follows:

Claim 1: (argued language)	U.S. Pat. 5, 910,984 to Low:
automatically initiated background processes	*see* Low col. 10, l. 66 through col. 11, l. 8, i.e., "Upon the first service logic 50 being notified that a CS to which it is currently providing services has entered it stable phase, the service logic 50 will save to the reliable store 55 all relevant state data for processing the CS service request; this data will include relevant CV context data and state data on the SLP processing being executed to service the service request. Of course, if a CS has already reached its stable phase before requesting a service, then the service logic 50 will save appropriate state data to the store 55 on responding to the service request."
which remotely backup information	*see* Low col. 11, ll. 1-3, i.e., "the service logic 50 will save to the reliable store 55 all relevant state data for processing the CS service request ..."
which has been locally stored	*see* Low col. col. 10, ll. 41-48, i.e., "In the FIG. 10 embodiment, the SPA comprises first service logic 50 typically in the form of a general purpose processor (including *local memory*) running operating system software to provide SLEE functionality, and one or more SLP programs. The first service logic 50 interacts with an SSP through an

	interface 51 and normally provides the functionality of the SPA in respect of providing services to the SSP [emphasis added]."
in ones of said network elements	We find locally stored information is stored in the "local memory" of service logic 50 (i.e., a "network element"). *See* Low col. 10, l. 43. We further find the claimed "network element" broadly but reasonably reads on each of the elements shown in Low's Fig. 10, in addition to the Service Providing Apparatus (SPA) considered as a whole.

We find the Low reference discloses all that is claimed. Therefore, for at least the aforementioned reasons, we conclude the Examiner has met the burden of presenting a prima facie case of anticipation. Accordingly, we will sustain the Examiner's rejection of independent claim 1 as being anticipated by Low.

We further note that Appellants have not presented any substantive arguments directed separately to the patentability of dependent claims 2 and 3. In the absence of a separate argument with respect to the dependent claims, those claims stand or fall with the representative independent claim. *See In re Young,* 927 F.2d 588, 590, 18 USPQ2d 1089, 1091 (Fed. Cir. 1991). *See also* 37 C.F.R. § 41.37(c)(1)(vii)(2004). Therefore, we will sustain the Examiner's rejection of these claims for the same reasons discussed *supra* with respect to independent claim 1.

Independent Claim 4

We consider next the Examiner's rejection of independent claim 4 as being anticipated by Low. We note that Appellants have presented claims 4, 8, 12, 16, and 20 as a group under a separate heading (Br. 13). We particularly note that Appellants have chosen to present arguments primarily directed to independent claim 4 even though independent claim 12 is clearly the broadest claim in this group (*see* Br. 13-14). Therefore, we consider claim 4 as separately argued. We consider claims 8, 12, 16, and 20 as a group *infra*. *See* 37 C.F.R. § 41.37(c)(1)(vii)(2004).

Appellants argue there is no disclosure in Low for storing at a database of a network element manager respective local data received from network elements (Answer 13).

We conclude that both Appellants and the Examiner have given incomplete consideration to the teaching value of the Low reference. We note that Low discloses "[t]he reliable store 55 is, for example, a fault-tolerant *database* or a disc drive" (col. 11, ll. 30-31, emphasis added). Thus, we find that a broad but reasonable reading of the claim on the reference corresponds "reliable store 55" and the local memories of "normal service logic 50" and "backup service logic 52" to a plurality of network elements where we find the database of "reliable store 55" is a database "of the network element manager" (i.e., where "recovery control 53" is a "network element manager" that uses the data stored in the database (i.e., "reliable store 55" via "backup service logic 52") to restore state and/or call context data (*see* col. 10, ll. 49-57; col. 11, ll. 19-29).

In the reply brief, Appellants further argue there is no disclosure in Low of storing *at a network element manager* local data received from network elements (Reply Brief 3, emphasis added).

In response, we note that "storing *at* a network element manager" is not claimed (*id.*). In contrast, the claim merely requires "storing the respective local data at a database *of* the network element manager" (claim 4, emphasis added). Thus, we find "normal service logic 50" stores the local data at a database ("reliable store 55") *of* the network element manager (i.e., "recovery control 53"), as claimed (claim 4, *see also* Low, Fig. 10).

While we have found an alternative reading of the claim on the reference, we nevertheless find the weight of the evidence supports the Examiner's conclusion that claim 4 is anticipated by Low. Accordingly, we will sustain the Examiner's rejection of independent claim 4 as being anticipated by Low.

Claims 8, 12, 16, and 20

We consider next the Examiner's rejection of claims 8, 12, 16, and 20 as being anticipated by Low. Since Appellants' arguments with respect to this rejection have treated these claims as a single group which stand or fall together, we will select independent claim 12 as the representative claim for this rejection because we find it is the broadest independent claim in this group. *See* 37 C.F.R. § 41.37(c)(1)(vii)(2004).

Appellants argue that claims 8, 12, 16, and 20 are not anticipated by Low for the same reasons previously argued with respect to independent claim 4 (Br. 14, ¶¶ 2-3).

We note that we have found *supra* that independent claim 4 is anticipated by Low. In addition, we find representative claim 12 broadly but reasonably reads on Low, as follows:

Claim 12:	U.S. Pat. 5, 910,984 to Low:
A network element manager, comprising:	Here, we will broadly but reasonably correspond the Service Providing Apparatus (SPA) of Fig. 10 to the recited "network element manager" where we find the SPA performs essential management functions via "Recovery Control Functional Unit 53," as discussed *supra* with respect to claim 4. *see* Low Fig. 10, col. 4, ll. 14-24; *see also* "recovery control functional unit 53," col. 10, ll. 53-57.
an interface being operable to communicate with a plurality of network elements of a voice and data network,	*see* Low, "interface 51" illustrated within the SPA shown in Fig. 10, col. 10, ll. 45-48, l. 56.
using at least one telecommunications network control channel,	*see* Low, col. 2, ll. 15-25: "In the FIG. 1 network, basic call processing (that is, call setup, maintenance and clearance) is carried out by one (or more) service switching points SSP 10 to which End Users 11 are connected. Additional services, such as those listed above, are provided, on request, to the SSP 10 either by a service control point (SCP) 12 or an Adjunct 13, both of which are examples of service-providing apparatus (SPA). The Adjunct 13 is directly associated with the SSP 10 whilst the SCP 12 and SSP 10

	communicate with each other via a common *channel* signalling (CCS) network 14 that will typically include signal transfer points (STP) 18 [emphasis added]."
and receive respective local configuration data regarding the plurality of network elements; and	*see* Low col. 11, ll. 1-3, i.e., "the service logic 50 will save to the reliable store 55 all relevant state data for processing the CS service request ..."
a memory operable to store the respective local configuration data regarding the plurality of network elements.	*see* Low col. col. 10, ll. 41-48, i.e., "In the FIG. 10 embodiment, the SPA comprises first service logic 50 typically in the form of a general purpose processor (including *local memory*) running operating system software to provide SLEE functionality, and one or more SLP programs. The first service logic 50 interacts with an SSP through an interface 51 and normally provides the functionality of the SPA in respect of providing services to the SSP [emphasis added]."

While we have again found an alternative reading of the claim on the reference, we nevertheless find the weight of the evidence supports the Examiner's conclusion that independent claim 12 is anticipated by Low. Accordingly, we will sustain the Examiner's rejection of independent claim 12 as being anticipated by Low.

Pursuant to 37 C.F.R. § 41.37(c)(1)(vii), we have decided the appeal with respect to the remaining claims in this group on the basis of the selected claim alone. Therefore, we will sustain the Examiner's rejection of claims

8, 16, and 20 as being anticipated by Low for the same reasons discussed *supra* with respect to representative claim 12.

Claims 5, 9, 13, and 17

We consider next the Examiner's rejection of dependent claims 5, 9, 13, and 17 as being unpatentable over Low in view of Browne. Since Appellants' arguments with respect to this rejection have treated these claims as a single group which stand or fall together, we will select claim 5 as the representative claim for this rejection. *See* 37 C.F.R. § 41.37(c)(1)(vii)(2004).

Appellants argue that claims 5, 9, 13, and 17 are patentably distinguishable over Low and Browne for the same reasons independent claims 4 and 12 are patentably distinguishable over Low (Answer 14). Appellants further argue there is no citation by the Examiner to the specific teaching in the prior art that would motivate the combination, as required by the MPEP and governing Federal Circuit caselaw (Answer 17).

The Examiner disagrees. The Examiner asserts that Low needs a protocol specification in order to be built. The Examiner notes that Browne teaches "[a]n inter-network call accounting system for use in a communication network such as the public switched telephone network" (Browne, abstract) (Answer 8-9). In the rejection, the Examiner concludes that an artisan would have used Browne's method of data collection in a voice/data network "in order to utilize legacy [inter-network] systems" (Answer 5).

We have found *supra* that independent claims 4 and 12 are anticipated by Low. Therefore, we see no deficiencies with respect to Low and further note that Appellants have failed to argue the specific limitations of dependent claims 5, 9, 13, and 17. We note that arguments Appellants could have made but chose not to make in the Briefs have not been considered and are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(vii)(2004). *See also In re Watts*, 354 F.3d 1362, 1368, 69 USPQ2d 1453, 1458 (Fed. Cir. 2004).

With respect to the issue of motivation, we note the U.S. Supreme Court recently stated:

> When a work is available in one field, design incentives and other market forces can prompt variations of it, either in the same field or in another. If a person of ordinary skill in the art can implement a predictable variation, and would see the benefit of doing so, §103 likely bars its patentability. Moreover, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond that person's skill. *KSR International Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1731, 82 USPQ2d 1385, 1389 (2007).

This reasoning is applicable here. We note that Low and Browne are both directed to telecommunications networks. We further note that Browne is merely relied on by the Examiner for its teaching of a method of data collection in a telecommunication network (*see* Answer 5). We find Browne offers an improved billing system that supports itemized billing for an inter-network telecommunication system (i.e., a system with multiple network operators) (*see* Browne, abstract; col. 2, ll. 28-41). Therefore, we conclude that modifying Low with the improved data collection and billing system of

Browne would have been a predictable variation of prior-art elements according to their established functions. Given the ubiquitous nature of telecommunication networks (as taught by both Low and Browne), we find common sense dictates that the modification proffered by the Examiner would have been well within the level of knowledge possessed by a person having ordinary skill in the art.[1] Because we find Appellants have failed to persuasively rebut the Examiner's rejection, we will sustain the Examiner's rejection of representative claim 5 as being unpatentable over Low in view of Browne.

Pursuant to 37 C.F.R. § 41.37(c)(1)(vii), we have decided the appeal with respect to the remaining claims in this group on the basis of the selected claim alone. Therefore, we will sustain the Examiner's rejection of claims 9, 13, and 17 as being unpatentable over Low in view of Browne for the same reasons discussed *supra* with respect to representative claim 5.

Claims 6, 10, 14, 18, and 21

We consider next the Examiner's rejection of claims 6, 10, 14, 18, and 21 as being unpatentable over Low in view of Reed. Since Appellants' arguments with respect to this rejection have treated these claims as a single

[1] *See KSR*, 127 S. Ct. at 1732, 82 USPQ2d at 1390 ("When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill in the art has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense.").

group which stand or fall together, we will select independent claim 21 as the representative claim for this rejection. *See* 37 C.F.R. § 41.37(c)(1)(vii)(2004). We note that independent claim 21 contains the limitations of dependent claim 6 argued by Appellants.

Appellants argue that Reed does not overcome the deficiencies of Low. Appellants further argue that there is no disclosure in Reed of: (1) an IP gateway network element having an active memory, and a random access memory, and (2) copying configuring files to the random access memory from the active memory, and (3) copying contents of the random access memory to the network element manager using the FTP protocol (Br. 18-19).

We see no deficiencies with respect to Low, as discussed *supra* with respect to independent claims 1, 4, and 12.

With respect to the claimed step of copying configuration files from active memory to random access memory, we look to the Specification for *context*. We find Appellants broadly disclose: "The configuration files are copied to the RAM disk on the NE [network element] from active memory." (Specification 41, l. 20). Thus, we find no special definition for "active memory" in the Specification. We note that Low teaches copying state and/or call context data (i.e., "configuration" data) from "service logic 50" to "reliable store 55," as discussed *supra*. *See* Low col. 11, ll. 1-3, i.e., "the service logic 50 will save to the reliable store 55 all relevant state data for processing the CS service request ..." Thus, we find Low teaches copying data from an active memory (i.e., local memory (col. 10, l. 43) to a database store (i.e., "reliable store 55," col. 4, ll. 48-49, col. 11, ll. 30-31). Because

database tables are typically manipulated in RAM (and persistently stored on disk), we find Low at least suggests the claimed steps of copying.

We note that Reed relates to "an automated communications system which coordinates the transfer of data, metadata, and instructions between databases in order to control and process communications" (col. 1, ll. 10-15). Because Reed teaches the use of standard Internet Protocols, e.g., File Transfer Protocol (FTP), as well as FTP servers, and the World Wide Web, we agree with the Examiner that the combination of Low and Reed teaches and/or suggests the claimed invention, including the recited IP gateway network element (i.e., merely a node that serves as an entrance to another network), where such gateway nodes are ubiquitous on the Internet and World Wide Web. *See* Reed, e.g., "Standard Internet protocols for accessing the Web can also be used for accessing the information in the provider or consumer databases," col. 14, l. 14 through col. 15, l. 3. *See also* Reed at column 114:

> The FTP service object 1310 would allow users to select a local file or files which the FTP service object 1310 would monitor and automatically transfer to the FTP partner server 1302 at periodic intervals or when the files had changed. The same FTP service object 1310 could be used to restore backed up files from the FTP partner server 1302 to the user's local system. (Reed, col. 114, ll. 26-33).

Thus, we find the weight of the evidence supports the Examiner's finding that the combination of Low and Reed teaches and/or suggests each limitation (claim 21, claim 6).

Appellants further argue there is no citation by the Examiner to the specific teaching in the prior art that would motivate the modification of

Low with Reed, as required by the MPEP and governing Federal Circuit caselaw (Br. 18-19).

We note that Low and Reed are both directed to computer networks. We further note that Reed is merely relied on by the Examiner for its teaching of notoriously well-known Internet and FTP protocols, that (in one embodiment) are used to restore backed-up files from an FTP server to the user's local system (Reed, col. 114, ll. 26-33). Therefore, we conclude that modifying Low with the Internet and FTP protocols of Reed would have been a predictable variation of prior-art elements according to their established functions. Given the ubiquitous nature of telecommunication networks and the Internet, we again find common sense dictates that the modification proffered by the Examiner would have been well within the level of knowledge possessed by a person having ordinary skill in the art. Because we find Appellants have failed to persuasively rebut the Examiner's rejection, we will sustain the Examiner's rejection of representative claim 21 as being unpatentable over Low in view of Reed.

Pursuant to 37 C.F.R. § 41.37(c)(1)(vii), we have decided the appeal with respect to the remaining claims in this group on the basis of the selected claim alone. Therefore, we will sustain the Examiner's rejection of claims 6, 10, 14, and 18 as being unpatentable over Low in view of Reed for the same reasons discussed *supra* with respect to representative claim 21.

Claims 7, 11, 15, and 19

Lastly, we consider the Examiner's rejection of dependent claims 7, 11, 15, and 19 as being unpatentable over Low in view of Browne, and

further in view of Reed. Since Appellants' arguments with respect to this rejection have treated these claims as a single group which stand or fall together, we will select claim 7 as the representative claim for this rejection. *See* 37 C.F.R. § 41.37(c)(1)(vii)(2004).

Appellants argue that Browne and Reed fail to remedy the deficiencies of Low, as previously argued (Br. 19-20).

We find no deficiencies with Low, as discussed *supra* with respect to claims 1, 4, and 12. Because we find Appellants have failed to persuasively rebut the Examiner's rejection, we will sustain the Examiner's rejection of representative claim 7 as being unpatentable over Low in view of Browne, and further in view of Reed.

Pursuant to 37 C.F.R. § 41.37(c)(1)(vii), we have decided the appeal with respect to the remaining claims in this group on the basis of the selected claim alone. Therefore, we will sustain the Examiner's rejection of claims 11, 15, and 19 as being unpatentable over Low in view of Browne, and further in view of Reed, for the same reasons discussed *supra* with respect to representative claim 7.

DECISION

We have sustained the Examiner's rejection of all claims on appeal. Therefore, the decision of the Examiner rejecting claims 1-21 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

KIS

BARTON E. SHOWALTER, ESQ.
BAKER BOTTS L.L.P.
2001 ROSS AVENUE
SUITE 600
DALLAS, TX 75201-2980